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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,612	12/24/2003	Daniel W. Cushing	03-1090	1611
44702	7590	07/19/2006		
OSTRAGER CHONG FLAHERTY & BROITMAN PC 250 PARK AVENUE, SUITE 825 NEW YORK, NY 10177			EXAMINER PIZIALI, ANDREW T	
			ART UNIT	PAPER NUMBER

1771

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/707,612

Applicant(s)

CUSHING ET AL.

Examiner

Andrew T. Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 40 is/are pending in the application.
- 4a) Of the above claim(s) 6-18 and 40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/24/03 & 11/9/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/7/05
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed on 5/18/2006 has been entered. The examiner has withdrawn the objection to the drawings based on the newly submitted drawings.

### ***Claim Rejections - 35 USC § 102/103***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US Patent Application Publication 2004/0219855 to Tsotsis.

Regarding claims 1-2 and 4-5. Tsotsis discloses a two-layer composite material comprising a substantially continuous polyphenylsulfone substrate material and a plurality of unidirectional long glass fibers substantially embedded within the substrate material (see entire

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document including [0022], [0023], [0032], [0036], [0040] and Figure 3). Tsotsis discloses that a substrate material may be bonded to one or both sides of the unidirectional fabric [0040] and may be infused with resin to form a substantially continuous material [0045]. Tsotsis discloses that the fibers can be taken from a creel containing multiple spools of (long) fibers [0022].

Tsotsis discloses that the polyphenylsulfone substrate material may comprise continuous fibers [0029].

Considering that the composite taught by the applied prior art is substantially identical to the claimed composite in terms of a polyphenylsulfone substrate material with substantially embedded long glass fibers, it appears that the structure taught by the applied prior art inherently possesses the claimed heat release property.

The Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

In the event that it is shown that the applied prior art does not disclose the claimed embodiment with sufficient specificity, the invention is obvious because the prior art specifically discloses the claimed constituents.

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Regarding claim 2, Tsotsis discloses that glass fibers may comprise a plurality of unidirectional long glass fibers [0022].

Regarding claims 4 and 5, the applicant claims that the composite material is for use in a specific component. It is noted that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). Therefore, considering that the composite taught by the applied prior art is substantially identical to the claimed composite in terms of substrate material and embedded fibers, it appears that the prior art structure is capable of performing the intended use.

5. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USPN 5,014,755 to Bompard et al. (hereinafter referred to as Bompard).

Regarding claims 1-2 and 4-5. Bompard discloses a two-layer composite material comprising a substantially continuous polyphenylsulfone substrate material and a plurality of unidirectional long glass fibers substantially embedded within the substrate (see entire document including column 2, line 58 through column 3, line 19 and Figure 1). Bompard discloses that porosity of the PPS substrate material is close to 0% (column 5, lines 46-56).

Considering that the composite taught by the applied prior art is substantially identical to the claimed composite in terms of a polyphenylsulfone substrate material with substantially

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embedded long glass fibers, it appears that the structure taught by the applied prior art inherently possesses the claimed heat release property.

In the event that it is shown that the applied prior art does not disclose the claimed embodiment with sufficient specificity, the invention is obvious because the prior art specifically discloses the claimed constituents.

Regarding claim 2, Bompard discloses that glass fibers may comprise a plurality of unidirectional long glass fibers (column 2, line 58 through column 3, line 6).

Regarding claims 4 and 5, the applicant claims that the composite material is for use in a specific component. Considering that the composite taught by the applied prior art is substantially identical to the claimed composite in terms of substrate material and embedded fibers, it appears that the prior art structure is capable of performing the intended use.

***Claim Rejections - 35 USC § 103***

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication 2004/0219855 to Tsotsis in view of USPN 5,319,003 to Gomez et al. (hereinafter referred to as Gomez).

Regarding claims 1-5, Tsotsis discloses a two-layer composite material comprising a substantially continuous polyphenylsulfone substrate material and a plurality of unidirectional long glass fibers substantially embedded within the substrate material (see entire document including [0022], [0023], [0032], [0036], [0040] and Figure 3). Tsotsis discloses that a substrate material may be bonded to one or both sides of the unidirectional fabric [0040] and may be infused with resin to form a substantially continuous material [0045]. Tsotsis discloses that the fibers can be taken from a creel containing multiple spools of (long) fibers [0022].

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Tsotsis discloses that the polyphenylsulfone substrate material may comprise continuous fibers [0029].

Tsotsis is silent with regards to specific glass fibers, therefore, it would have been obvious to look to the prior art for conventional glass fibers. Gomez provides this conventional teaching showing that it is known in the resin/fiber composite art to use s-type or e-type glass fibers (see entire document including column 2, lines 60-68 and column 3, lines 28-31). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the glass fibers from s-type or e-type glass fibers, as taught by Gomez, motivated by the expectation of successfully practicing the invention of Tsotsis.

Considering that the composite taught by the applied prior art is substantially identical to the claimed composite in terms of a polyphenylsulfone substrate material with substantially embedded long e-type or s-type glass fibers, it appears that the structure taught by the applied prior art inherently possesses the claimed heat release property.

Regarding claim 2, Tsotsis discloses that glass fibers may comprise a plurality of unidirectional long glass fibers [0022].

Regarding claims 4 and 5, the applicant claims that the composite material is for use in a specific component. Considering that the composite taught by the applied prior art is substantially identical to the claimed composite in terms of substrate material and embedded fibers, it appears that the prior art structure is capable of performing the intended use.

7. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,014,755 to Bompard in view of USPN 5,319,003 to Gomez.

Regarding claims 1-2 and 4-5, Bompard discloses a two-layer composite material

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comprising a substantially continuous polyphenylsulfone substrate material and a plurality of unidirectional long glass fibers substantially embedded within the substrate (see entire document including column 2, line 58 through column 3, line 19 and Figure 1). Bompard discloses that porosity of the PPS substrate material is close to 0% (column 5, lines 46-56).

Bompard is silent with regards to specific glass fibers, therefore, it would have been obvious to look to the prior art for conventional glass fibers. Gomez provides this conventional teaching showing that it is known in the resin/fiber composite art to use s-type or e-type glass fibers (see entire document including column 2, lines 60-68 and column 3, lines 28-31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the glass fibers from s-type or e-type glass fibers, as taught by Gomez, motivated by the expectation of successfully practicing the invention of Bompard.

Considering that the composite taught by the applied prior art is substantially identical to the claimed composite in terms of a polyphenylsulfone substrate material with substantially embedded long e-type or s-type glass fibers, it appears that the structure taught by the applied prior art inherently possesses the claimed heat release property.

Regarding claim 2, Bompard discloses that glass fibers may comprise a plurality of unidirectional long glass fibers (column 2, line 58 through column 3, line 6).

Regarding claims 4 and 5, the applicant claims that the composite material is for use in a specific component. Considering that the composite taught by the applied prior art is substantially identical to the claimed composite in terms of substrate material and embedded fibers, it appears that the prior art structure is capable of performing the intended use.



***Response to Arguments***

8. Applicant's arguments filed 11/9/2005 have been fully considered but they are not persuasive.

Regarding withdrawn claims, the applicant asserts that claims 6-7, 9 and 40 should not be withdrawn. The examiner respectfully disagrees. Claim 6 is withdrawn because it is drawn to non-elected Species B from Species Group II. Claim 7 is withdrawn because it is dependent on claim 6, which is drawn to non-elected Species B from Species Group II. Claim 9 is withdrawn because it is dependent on claim 8, which is drawn to non-elected Species 2 from Species Group I. Claim 40 is withdrawn because it is drawn to Species 3 from Species Group I.

The applicant asserts that Tsotsis does not teach or suggest the use of a substantially continuous PPS substrate. The examiner respectfully disagrees. Tsotsis discloses that the PPS substrate material [0023] may be bonded to one or both sides of the unidirectional fabric [0040] and then infused with resin [0045]. Since the resin saturates the PPS substrate material, the resulting saturated PPS substrate material is continuous. In addition, Tsotsis discloses that the PPS substrate material may comprise continuous fibers [0029]. Therefore, the PPS substrate material may be considered a substantially continuous PPS substrate material.

The applicant asserts that Bompard does not teach or suggest the use of a substantially continuous PPS substrate. The examiner respectfully disagrees. Bompard discloses that after pressure is applied the porosity of the PPS substrate material is close to 0% and the laminate is homogenous (column 5, lines 46-56). Therefore, the PPS substrate material may be considered a substantially continuous PPS substrate material.

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***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

atp

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ANDREW T. PIZALI  
PATENT EXAMINER